

**GENERAL SERVICES ADMINISTRATION
FEDERAL SUPPLY SERVICE
MID-ATLANTIC REGION
INTEGRATED WORKPLACE ACQUISITION CENTER
TECHNICAL REQUIREMENTS BOOKLET
FOR
CARPET, CARPET TILES AND CARPET CUSHION
SCHEDULE 72**

TECHNICAL INSTRUCTIONS, INSPECTION, AND REQUIREMENTS

Definitions. For the purposes of this solicitation, the meaning of all carpet terms used will be as defined in the Carpet and Rug Institute's "Carpet Specifier's Handbook" except fusion bonded. Fusion bonded tile construction shall be defined as "embedding fiber or yarn between two parallel sheets of adhesive coated backings. The sheets are slit, forming two pieces of cut pile carpet which are simultaneously combined with a reinforcing layer yielding a unitary structure. This method does not include sewing, stitching, or the use of needles in any part of the process, before or after fiber or yarn implantation."

Test Procedures. Unless otherwise specified, the latest revision of referenced test methods, e.g., ASTM, AATCC, etc., in effect on date of the solicitation issue shall be the required test procedure.

Carpet Fire Safety Standards. Note that the Pill Test (CPSC FFI-70) is mandatory for all carpets. Contractors have the option of further testing their carpets for a radiant panel and/or a smoke density rating. Federal Government customers will be advised of flammability ratings for each carpet through the contractor brochures. (See page 12 for explanation of GSA fire safety codes.)

Carpet Fibers. All synthetic fiber shall be minimum 15 denier per filament, with minimum 2-ply yarns. Except for wool, loop pile shall be 100% continuous filament; cut and loop shall be 100% continuous filament for the loop portion and may be continuous or staple filament for the cut pile portion; cut pile carpet shall be staple or 100% continuous filament. For all loop and cut and loop items, when ply is co-mingled, turns per inch (twist) does not apply. Heat setting of yarn plies is required when twist is specified. Twist is not required in cut pile carpet when using a singles yarn with crimp permanently heatset by the fiber producer at the fiber stage or for other specialty yarns. Such yarn produces a carpet with a velvet appearance. In regard to wool fiber, characteristics such as denier per filament, co-mingled, and crimp heatsetting do not apply. However, wool and wool/nylon blend fiber must bear the Wool Mark, Wool Blend Mark (Wool Bureau), Fernmark (Wools of New Zealand), etc.

Fiber Verification. In order to advertise to Government customers in contract brochures and marketing efforts that they use a particular fiber brand name in a particular style of carpet, offerors must submit written certification that a particular fiber is being provided for a specific carpet style. If a carpet manufacturer uses its own yarn/fiber brand name, the manufacturer must certify that this is the yarn/fiber name used commercially in that particular carpet style.

Pre-dyed Yarns. Pre-dyed yarns are dyed before tufting, weaving or bonding take place and include (but are not limited to) skein, stock, solution, and space dyeing. Yarns dyed by the beck process (normally used for dyeing carpet) are not considered pre-dyed yarns.

INSPECTION AND QUALITY ASSURANCE PROVISIONS

Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection/test requirements as specified herein. Except as otherwise specified in the contract, all testing must be performed by a laboratory accredited by the Commerce Department's National Voluntary Laboratory Accreditation Program (NVLAP). The Government reserves the right to select samples and perform any of the inspection/tests set forth herein where such inspection/tests are deemed necessary to assure that supplies and services conform to prescribed requirements.

Classification of tests. The inspection and testing of carpet items shall be classified as (1) preaward, and (2) post award testing. Inspection and testing of cushion and adhesives shall be classified as (1) preaward and (2) post award testing.

Carpet preaward and post award testing and certification (general). Preaward and post award testing shall consist of all applicable tests listed in this Purchase Description (PD). Post award testing is required every 5 years from date of award. Certification that the product construction/components have not changed and that the product continues to meet test requirements is required 30 months after award. A sample Carpet Testing Checksheet has been provided for reference at the end of this PD.

Each separate construction of each item must be tested. Only one color/pattern for each construction is required to be tested. However, if there is any other difference between items other than color and/or pattern, separate test results are required. **A summary sheet from the laboratory listing required tests and results must be submitted—not individual test reports.** The offeror must have individual test reports available when the Government requests them. **If any construction/component changes are made to an awarded item, the contractor must notify the Contracting Officer. Re-testing will, in most cases, be required prior to approval. The characteristics to be retested will depend upon the changes and components affected.** Examples of construction/component changes would be changes in fiber or backing or chemical formulations which affect smoke and flame characteristics.

For carpet styles which are marketed with an attached cushion, testing is required for the product as a unit (carpet and cushion); in addition, separate testing is required for the cushion characteristics. When a carpet style is offered as optional with attached cushion, testing for the basic carpet (without cushion) is required, along with separate testing for the cushion characteristics.

When a tile product and matching 6-foot roll carpet are offered, testing of the tile product will suffice if the matching broadloom is identical in construction, i.e., same backing and face yarn systems. Offeror must certify that the constructions are, in fact, identical.

Cushion/adhesive preaward and post award testing (general). Preaward and post award testing for cushion and adhesive shall consist of all applicable tests listed in this PD.

Preaward carpet and cushion/adhesive test submission. Preaward test report summaries must be submitted with the offer. Test report summaries must be dated no earlier than 180 calendar days prior to submission. Individual tests listed in the summary must have been performed no earlier than 180 days prior to submission. Test results will be reviewed to determine if they are complete, accurate, and show passing results for all required tests. Offerors will be notified of the results of this review, and will be given 15 calendar days to make any necessary corrections. Failure to submit complete, accurate, passing test results within the time given will result in rejection of the offer for the applicable item(s).

Post award carpet and cushion/adhesive test and certification submission. The first post award submission for new offers will consist of certification to the GSA Contracting Officer that construction/components of products on contract have not changed and that products continue to meet all

TEST REQUIREMENTS FOR CARPET CUSHION

A. ATTACHED carpet cushion. When carpet is manufactured with an attached cushion, cushion must meet the following minimum requirements (SIN 31-603).

Characteristic	Requirement			Test Method
	Chem. Frothed	Mech. Frothed Urethane	EVA & PVC	
Density, min. (lb/ft ³)	11	14	15	ASTM D 3574
Compression force deflection min., (PSI)	5	5	—	ASTM D 3574
Compression deflection min., (PSI)	—	—	12	ASTM D 1667
Compression Set, max. % (50%)	15	15	—	ASTM D 3574
Ash content max. %	50	50	50	ASTM D 297

B. UNATTACHED carpet cushion (must be manufactured with a scrim or latex coating at least on one side, as applicable, to facilitate ease of installation). All cushion shall pass the pill test (CPSC FF-1-70).

RUBBER SIN (31-305)

	Rippled (waffled) Cellular	Cellular Sponge Flat/Semi-flat	High density	
Compression Resistance, min. (25%)	0.500	2.5	7	ASTM D 3676
Compression set, max.% (50%)	12.5	8.75	12.5	ASTM D 3676
Ash content, max.	60	60	60	ASTM D 297

URETHANE (SIN 31-305)

	Prime	Densified Prime	Bonded	High Density	
Density, min. lb/ft ³	2.7	3.5	8.0	15.0	ASTM D 3574
Compression force deflection, min. (65%)	1.0	1.8	7.0	45.0	ASTM D 3574
Compression set, max. % (50%)	15.0	10.0	15.0	15.0	ASTM D 3574
Ash content, max. %	50.0	50.0	n/a	50.0	ASTM D 297

NATURAL FIBER (Rubberized Hair & Jute, Jute & Fiber (SIN 31-305)

Characteristic	Requirement	Test Method
Weight (oz./sq. yd., min.) <u>2/</u>	40	ASTM D 3676
Compression set, max. % at 25% deflection	15	ASTM D 1667 <u>1/</u>
Breaking strength, lbs., min.	30	ASTM D 2646

SYNTHETIC NEEDLED FIBER (SIN 31-305)

Weight (oz./sq. yd., min.) <u>2/</u>	28	ASTM D 3676
Density (lb./ft ³ , min.)	7.0	ASTM D 3676
Min. synthetic fiber by wt. (%)	95 <u>3/</u>	ASTM D 629
Breaking strength, lbs., min.	30	ASTM D 2646

1/ Compression set values to be calculated based on percentage of original thickness.

2/ As indicated in submitted commercial brochure specifications and to be confirmed in preaward and subsequent testing. (For products with weights exceeding the specified minimum (40 oz.).

3/ Excludes backing and coating materials used to enhance product performance.

C. **ATTACHED hardback backing (broadloom) (SIN 31-603)**. Shall be a suitably compounded polymer or copolymer of vinyl chloride resin plasticized with primary plasticizers only. The compound shall be 0.070 (+0.015, -0.010) inch thick, and weigh 50.5 ounces minimum per square yard. As an alternate, the backing may be composed of a fusion coated layer and a cellular vinyl layer, both suitably compounded. Where the alternate secondary backing is used (1) the cellular vinyl layer component shall be 0.070 (+0.015, -0.010) inch thick and weigh 26.5 oz./sq. yd. minimum and (2) the fusion coated layer shall be homogeneous vinyl and weigh a minimum of 24 oz./sq. yd.

VISUAL OVERALL AND DIMENSIONAL EXAMINATIONS

Visual Examination for Carpet. The defects listed below shall be counted regardless of their proximity to one another, except where two or more defects represent a single local condition of the carpet, rug, or tiles in which case only the serious defects shall be counted. Continuous defects shall be counted as one defect for each square yard or fraction thereof in which they occur. The sample unit for this examination shall be one square yard for broadloom and cut rugs and one carpet square for tiles. The sample size shall be based on ANSI/ASQC Z1.4, with an AQL of 2.5 major and 6.5 total defects (major and minor combined) per hundred units (square yards/carpet tile). When examination is made of full carpet rolls, not more than one-fifth of the total sample square yardage shall be examined on any one roll. When the lot consists of less than 5 rolls, an approximate equal number of square yards shall be examined on each roll to yield the sample yardage. When examination is made on cut rugs/tiles, the number of rugs/tiles selected shall be sufficient to yield the sample yardage. Visual examination shall be made at a distance of approximately 6 feet.

CLASSIFICATION OF VISUAL DEFECTS

Examine	Defects	Classification	
		Major	Minor
Finish and Appearance	Not evenly constructed, affecting appearance.		X
	Marks across carpet	X	
	Discolored areas affecting appearance (variations in color due to crushing of pile shall not be considered a defect).		X
	Any noticeable unevenness on top surface appearance		X
	Any objectionable color other than specified, visible on top surface pile.		X
	Any obvious streak lengthwise (not part of pattern)	X	
	Pilling or fuzzing of pile yarn		X
	Spots or stains or embedded foreign matter		X
Material and Workmanship	Tufts missing in pile or not firmly secured	X	
	Seams: (when specified) not properly sewed or taped (N/A to carpet tile).	X	
	Binding: (when required) edges not securely bound (N/A to tiles).	X	
	Poor color match		X
	Back coating skips		X
	Backing reinforcement (when specified) imperfectly applied, poor adherence.	X	
	Cut, hole or tear	X	
	Carpet tile does not lay flat	X	

Overall Examination for Carpet. Each defect listed below shall be counted not more than once in each unit examined. The sample unit for this shall be one roll, rug, or tile. The number of rolls, rugs, or tiles examined for visual examination above shall be the sample size for this examination. The lot shall be unacceptable if one or more of the following defects are found.

Defects:

Overall uncleanness.

Rancid or otherwise objectionable odor.

Type not as specified.

Edges of rugs not finished as required.

Color not matching as required.

Dimensional Examination for Carpet. Each defect listed below shall be counted not more than once in each unit examined. The sample unit for this shall be one roll, rug, or tile. The number of rolls, rugs, or tiles examined for visual examination above shall be the sample size for this examination. The lot shall be unacceptable if one or more of the following defects are found.

Defects:

Cut rugs - width or length (more than) 1 percent less than specified.

Rolls - width (more than) 1 percent less than specified. A variation in quantity of plus 5% of the quantity ordered with a maximum limitation of 25 square yards (see contract for Variation in Quantity Clause). Total yardage in sample - total gross length of all pieces in sample less than the total gross lengths marked on piece tickets.

Tiles - width or length more than plus or minus 1/32" from that specified.

Inspection of Preparation for Delivery. An inspection shall be made to determine that the packaging, packing and marking comply with the requirements as specified in the contract or order. Defects shall be scored in accordance with the listing below. Sampling shall be in accordance with ANSI/ASQC Z1.4. Defects of closure listed shall be examined on shipping units in the end item inspection lot. The inspection level shall be S-2 with an AQL of 4.0 defects per hundred units.

Examine	Defect
Marking	Omitted; incorrect; illegible; improper size, location sequence, or method of application.
Material	Any component missing or damaged.
Workmanship	Inadequate application of components such as incomplete closure of container flaps, loose strapping, inadequate stapling, or distortion of container.
Contents	Net weight exceeds the requirements of the applicable box specification.

Visual Examination for Carpet Cushion. The defects listed below shall be counted regardless of their proximity to one another, except where two or more defects represent a single local condition of the cushion, in which case only the more serious defect shall be counted. In full length rolls continuous defects shall be counted as one defect for each yard or fraction thereof in which they occur. The sample unit for this examination shall be 1 roll. The acceptable quality level shall be 6.5 defects per hundred units. The inspection level shall be level S-4. The lot size shall be expressed in units of 1 linear yard when full length rolls are specified and one piece when special cut sizes are specified. When examination is made of full length rolls, not more than one third of the total sample yardage shall be examined in any one roll. When the lot consists of less than 5 rolls, an approximate equal number of yards shall be examined on each roll to yield the sample yardage.

Defects:

Woven or non-woven backing not securely adhered to cushion.

Woven or non-woven backing not uniform.

Cut, hole or tear of any size in cushion or backing.

Thin or weak place in cushion or backing.

Length of pieces or width not as specified.

Dirty or stained.

Objectionable odor (normal urethane or rubber smell acceptable).

Packaging, Packing and Marking of Carpet, Carpet Tiles and Carpet Cushion and Carpet Adhesive, if Offered. The packaging, packing and marking shall be as stated in the contract or order.

7. List any community (e.g., Chamber of Commerce), charitable or similar organizations with which your provider is involved.

NOTE: Supplier will be required to list any memberships in professional associations as well as certification credentials in Government contract brochures and pricelists to facilitate customer information and decisionmaking.

Furniture moving to access carpet underneath should be considered part of the normal cleaning job. Special attention to **spots and stains and special treatment with "pre-conditioning" agents in heavily soiled entry and traffic areas** also should be included in the cost of normal cleaning. Moving of heavy items such as computers and loaded cabinets or extremely fragile furnishings, and extreme soiling situations which would require prolonged effort, are outside the scope of this contract and may be negotiated by the customer on an open market basis.

Cleaning methods/post-cleaning treatments are as follows:

- Steam cleaning (hot water extraction)
- Shampooing (rotary brush)
- Dry compound (i.e., Host, Capture)
- Dry foam cleaning
- Absorbent pad or bonnet 2/
- Post-cleaning treatments (deodorants, soil/stain protectors, etc.)

Note: Kits containing interim use maintenance products which allow for quick stain removal between regularly scheduled maintenance may be offered under the SIN category for accessories. ***Provide 800 telephone number or equivalent for customer service regarding maintenance matters.***

1/ In recommending walk-off mats as an option to reduce carpet soiling, contractors are to refer Federal customers to GSA supply sources. A listing of addresses and phone numbers of companies who provide mats and matting, is available from the GSA contracting office at (703) 305-5213 or from GSA Schedules E Library at www.fss.gsa.gov.

2/ If specifying the bonnet method, please justify types of carpet and circumstances under which you will use this method, since some carpet manufacturers indicate this cleaning method voids carpet warranties.

GSA CARPET TESTING CHECKSHEET

OFFEROR: _____

SIN: _____

STYLE NAME (& FIBER BRAND): _____

TEST	OK	N/A	FAIL	OLD	WRONG TEST METHOD	NOT SUB- MITTED	OTHER
DENSITY							
GAUGE/PITCH () (SIN 31-304f only)							
PILE WT. ()							
YARN PLY							
DENIER PER FILAMENT							
TWIST PER IN. Single/Ply							
COLORFASTNESS							
TUFT BIND							
WOOL MARK							
PILL TEST							
RADIANT PANEL							
SMOKE DENSITY							
FLAMMABILITY RATING	A B C						
CERTIFICATION (No nondurable treatment) Pg.12, para. 1							
DIMENSIONAL STABILITY (Tile only)							
ELECTROSTATIC PROPENSITY GENERAL USE (KV)							
ELECTROSTATIC PROPENSITY (SIN 31-304b ONLY) COMPUTER GRADE							
ELECTRICAL RESISTANCE (SIN 31-304b ONLY) COMPUTER GRADE							
ANTIMICROBIAL (SIN 31-304a ONLY)							
FUNGICIDE (SIN 31-304a ONLY)							
BIOCIDE CERTIFICATION (31-304a ONLY)							
STAIN RESISTANCE (SIN 31-304d ONLY)							
DELAMINATION STRENGTH (SIN 31-304f only)							
BRANDED FIBER LETTER							
TRADEMARK REGISTRATION #							
CRI GREEN LABEL # (if applicable)							